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needed is obvious to one of ordinary skill in the art. Applicant respectfully traverses this rejection.

Spencer discloses an automatic bicycle shifting system that includes a learn mode. During the learn mode, the rider manually shifts the transmission over a typical riding course and the system records operating parameters associated with a set of desired shifting decision points and then during the automatic mode, automatically shifts gears when similar situations are again encountered, see specification at col. 2, lines 14-20. The shifting decisions are selectively based on _constant_ cadence, _constant_ pedaling force or exponential acceleration, see specification at col. 2, lines 54-56. For example, if during the learn mode the rider shifts to maintain a constant or target cadence, the system will record the operating parameters for that shifting sequence and when similar conditions arise under the automatic mode, the system will shift the bicycle to maintain the target cadence. The decision to shift between gears, while in the automatic mode, is based on maintaining that target cadence.

The present invention also discloses an automatic shifting system that includes a learn or setting mode. However, the present invention allows the user to select - through manual shifts while in the learn mode - the actual speeds at which gear changes occur, in turn selecting a speed range for each gear (e.g. gear 2 is used between and 6 and 10 mph). At each shift, the system stores the corresponding wheel speed while in the learn mode and then uses those stored wheel speeds to automatically shift gears at the same wheel speeds while in the automatic mode. This allows the rider to specify a different cadence range for each gear, if desired. For example, some riders prefer a lower cadence for lower gears (allows them to pedal while standing for quick acceleration from a stop) and a higher cadence for higher gears (provides better efficiency and control at higher speeds). Accordingly, in the present invention the decision to shift is not based on maintaining a certain parameter such as a uniform target cadence across all gears as taught by Spencer, but is based on achieving the desired speed range for each gear. Therefore, Spencer fails to teach or suggest an automatic shifting system that includes a setting mode during which the rider selects different wheel
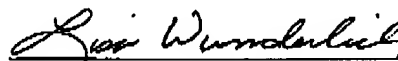
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speeds at which the system will shift between each gear ratio as claimed in claim 1 of the present invention. Thus, claims 1-32 are patentable over Spencer and the obviousness rejection should be withdrawn.

This reply is believed to be fully responsive to the comments and suggestions of the Examiner and to place this application in condition for allowance. Favorable action is requested.

Respectfully submitted,

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